

In re Patent Application of:

BAHL ET AL

Serial No. 10/050,642

Filed: **JANUARY 16, 2002**

REMARKS

The Notice of Allowable subject matter in Claims 5, 8, 13, 18 and 20 is gratefully appreciated. However, in view of the manner in which the claims have been amended to more particularly characterize Applicants' invention, particularly with respect to a feature thereof that is not only not disclosed or suggested, but is taught against in the cited prior art, favorable reconsideration of all the claims in their currently amended form is respectfully requested.

In response to objection to the drawings in item 1 on page 2 of the outstanding Office Action, enclosed please find new sheets of drawings with the appropriate margins to comply with current drawings standards. Approval of the replacement drawings is respectfully requested.

The rejection of Claims 1-4, 6-9, 11, 12, 14-17, 19 and 21, under the provisions of 35 U.S.C. 102, as allegedly being anticipated by the patent to Pouzoullic, 5,550,461, for the reasons set forth on pages 2-8 of the outstanding Office Action, is respectfully traversed.

As pointed out above, and as can be seen from the amendments to each of the independent claims, Applicants' invention, as currently claimed, is effective to provide a redundant power supply wherein there is a continuous flow of a reduced amount of current that will enable the rapid insertion of the redundant supply in the event of a failure of the main or principle supply supplying current to the load, this continuous flow of current effectively preventing the interruption in the supply of current to the load in the event of the inability of the main supply to operate as intended.

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As pointed out above, and as can be seen from the amendments to the claims, each of independent claims 1, 6, 11 and 14 has been amended to underscore the above feature of the invention. In addition, Claim 21 has been rewritten in self-contained form and to include the above features of the invention. As such, it is respectfully submitted that each of the independent claims remaining in the application as well as the claims dependent thereon positively define the continuous flow of current to the output node less than the current demand of the load, so that there is no interruption of supply of current to the load in the event of the inability of the main power supply to supply regulated output voltage that meet the current demand of the load.

In contrast therewith, the cited U.S. Patent to Pouzoullic not only does not continuously supply current in the manner called for in Applicants' claims, but allows the main diode of the current supply to be turned off or blocked, as referenced in the patent.

More particularly, with attention directed to Figure 3 of the patent to Pouzoullic, when the two voltages V_0 and V_1 are equalized as the voltage V_0 increases (or the voltage V_1 decreases), the diode D1 is blocked and the voltage at node 37 is then slightly higher than the voltage at node 34. This blocking of the diode D1 effectively interrupts the flow of current to the load.

In typical power supply circuit topologies, the power supply must supply some amount of current to the load to insure that the power supply does not go into restart or what is commonly known as "hiccup". In the hiccup mode, if the second or auxiliary

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supply were to cease supplying power, the power supply which supplies the voltage V_1 would have to come out of hiccup mode and then forward bias the diode D1. In this situation, it is likely that the power supply will be unable to come up to steady state operation and regulation before the output voltage V_0 drops out of tolerance.

A further problem is that at the output voltage V_0 drops instantaneously (such as removal of the dominant power supply), and the power supply was functioning in steady state (not in hiccup mode), but not supplying load current (the diode D1 is blocked or off), a specified amount of time is required to slew the output voltage V_1 high enough to forward bias the diode D1 so that it would be supplying the load current. The power supply cannot slew the voltage V_1 up fast enough, the output voltage V_0 must drop sufficiently to allow the diode D1 to become forward biased and supply load current. In both of these situations, there is an out-of-tolerance voltage dip because of the forward voltage of diode D1.

The present invention obviates these problems by making sure that the auxiliary or non-dominant power supply is continuously supplying a prescribed amount of current which keeps the power supply out of hiccup mode and keeps the diode forward biased or on at all times, allowing immediate responses to changes in the output voltage.

Since the features of the claimed invention enumerated above are not disclosed or suggested by Pouzollic, but in fact just the opposite is the case, it is respectfully submitted that the claims in their currently amended form are patentable, thereby placing the application in condition for allowance. Favorable reconsideration of this application and a Notice of Allowability

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of all the claims remaining are respectfully requested.

Should any minor informalities need to be addressed, the Examiner is encouraged to contact the undersigned attorney at the telephone number listed below.

Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account No. 01-0484 and please credit any excess fees to such deposit account.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Non-Fee Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on this 21 day of January, 2004.

